

## Medical rehabilitation

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### Sleep efficiency and metabolic status of Polish patients after liver transplantation

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**Background** Sleeping disorders affect 3 - 17% adults and if untreated they increase the noncommunicable diseases risk. Recommended sleep efficiency (SE) for adults is  $\geq 85\%$ /night. **Objectives** The aim of our study was to evaluate SE and chosen metabolic parameters (body mass index (BMI), body fat percentage (BF%), glycaemia, HOMA-IR, HbA1c and physical activity (PA)) of LTx pts. **Material and methods** Study group consisted of 42 LTx pts (24 men and 18 women) of Department of Transplant Medicine and Nephrology. Anthropometric, biochemical, PA and SE data using SeanseWear Armband were collected from September 2015 till July 2016. **Results** are presented as median (Min-Max) or mean  $\pm$  SD, also Pearson or Spearman correlation were estimated. Glycaemia differed statistically significantly between men and women [100mg/dl (74mg/dl-187mg/dl) vs 88,5mg/dl (60,0mg/dl-103mg/dl) respectively;  $p=0,0317$ ]. There were no statistically significant differences between genders in: BMI [27,7 $\pm$ 5,0kg/m<sup>2</sup>], HOMA-IR [1,02 (0,38 – 3,20)], HbA1c [5,2% (4,1%- 6,5%)], average METs [1,45 (0,93-1,98)] and SE [81 $\pm$ 8%]. Only 40,5% pts had correct BMI, only 21,4% - correct BF% vs 59,5% pts with excess BF%. SE for normal BMI pts was 84 $\pm$ 7%, for overweight pts – 82 $\pm$ 9%, for obese pts – 78 $\pm$ 9% ( $p=0,1721$ ). SE for normal BF% pts was 84 $\pm$ 6%, for excessive BF% pts - 80 $\pm$ 9%, for deficient BF% pts - 83 $\pm$ 8% ( $p=0,3436$ ). SE was negatively correlated with BMI ( $r=-0,41$ ,  $p=0,0445$ ), BF% ( $r=-0,44$ ,  $p=0,0307$ ) and glycaemia ( $r=-0,43$ ,  $p=0,0376$ ) for men, with HOMA-IR (17pts,  $r=-0,62$ ,  $p=0,0079$ ) for women and with glycaemia ( $r=-0,37$ ,  $p=0,0166$ ) for both genders. Almost 65% LTx pts had SE  $<85\%$ . **Conclusions** Most of LTx pts had insufficient SE. SE correlated negatively with such metabolic parameters as: BMI, BF%, glycaemia for men, HOMA-IR for women or glycaemia for both genders.